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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,817	02/24/2004	Yong Cheol Park	46500-000120/US	1150

30593 7590 02/04/2008

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EXAMINER	
ALUNKAL, THOMAS D	

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
02/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/784,817	PARK ET AL.	
	Examiner	Art Unit	
	Thomas D. Alunkal	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 11/21/07 have been fully considered but they are not persuasive.

Regarding applicant's arguments beginning on 7 of Remarks, applicant argues that the "Disk definition structure" of Ito does not correspond to "second information including a first pointer pointing to an address where the first information is recorded" as cited in the last Office Action. The Examiner respectfully disagrees. Referring to Figure 1 of applicant's specification, the data block of claim 1 includes a space bit map and a temporary disc definition structure which has a pointer that points to the start address of the space bit map. Similarly, the disc definition structure of Ito is located in the defect management information area. Furthermore, the well known function of the disk definition structure is to include data which shows the overall structure of the disk. Start position is just one of the data included in the disk definition structure. Thus, the Examiner believes that the disk definition structure of Ito corresponds to "second information including a first pointer pointing to an address where the first information is recorded" as recited in claim 1.

Next, applicant argues that "nothing in Ito teaches or suggests placing the second information in the last sector of the data block as required by claim 1." The Examiner respectfully disagrees. As cited in the previous Office Action, the mere rearrangement of parts (providing the DDS in the last sector of the data block) involves only routine skill in the art. Furthermore, regardless of its position in the data block, the DDS functions the same. In addition, providing the DDS in the last sector of the data

block does not produce new or unexpected results. Thus, as stated in the previous Office Action, merely relocating data from sector to sector would have been obvious to one of ordinary skill in the art and involves only routine skill in the art.

Regarding applicant's argument that Ito does not disclose the newly added limitations to the amended claims, these limitations will be addressed in the Detailed Action to follow.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (hereafter Ito)(US 6,160,778).

Regarding claim 25, Ito discloses a computer readable medium having a data structure for managing a data area of the computer readable medium (Abstract), comprising: a first management area storing a data block (Figure 2, Elements 4b and 10), a first information including recordation status indicating recorded areas and non-recorded areas of the data area (Figure 2, Element 6b), the data block having a second information including a first pointer pointing to an address where the first information is recorded (Figure 2, Element 10, disk definition structure), and wherein the data block

includes a plurality of sectors (Figure 2, Elements 11-12 and 20-22), and a second management area storing a latest block recorded in the first management area when no further recording can be made on the computer readable medium (Figure 2, Element 4b located in the lead-out area). Ito does not disclose where the first information is positioned within the data block.

However, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the volume structure (Figure 2, Element 6b) of Ito to the data block (Figure 2, Element 10), motivation being to increase the volume of the user data area in logical volume space.

Furthermore, Ito does not disclose wherein the second information is recorded in a last sector of the data block. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the disc definition structure of Ito to the last sector of the data block (Figure 2, Element 10), since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Namely, the DDS provides the same function regardless of its position in the data block.

Regarding claim 26, Ito discloses wherein the first information indicates recordation status of the data area on a recording unit by recording unit basis (Column 9, line 64-Column 10, line 5).

Regarding claim 27, Ito discloses wherein the data block includes at least one recording unit (Figure 2, Element 10 which contains multiple recording units).

Regarding claim 28, Ito discloses wherein the second information includes a second pointer pointing to an address where a defect list is recorded (Figure 2, Element 11, disk definition structure which points to the SDL).

Regarding claim 29, Ito discloses wherein the address is a first physical sector number of a location where the first information is recorded (Column 2, lines 46-51. Specifically, addresses are recorded on a sector-by-sector basis).

Regarding claim 30, Ito discloses wherein the first and second pointers identify most current versions of the first information and the defect list, respectively, as of when the second information is recorded (Column 19, lines 21-26).

Regarding claim 31, Ito discloses a method of recording management data on a recording medium (see Title), comprising: recording a data block in a management area (Figure 7, Element 720 and Figure 2, Elements 4b and 10), a first information including recordation status indicating recorded areas and non-recorded areas of the data area (Figure 2, Element 6b), the data block having second information including a first pointer pointing to an address where the first information is recorded (Figure 2, Element 10, disk definition structure), the data block including a plurality of sectors (Figure 2, Elements 11-12 and 20-22), and recording a latest data block recorded in the first management area in a second management area when no further recording can be made on the recording medium (Figure 2, Element 4b located in the lead-out area). Ito does not disclose where the first information is positioned within the data block.

However, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the volume structure (Figure 2, Element 6b) of Ito

to the data block (Figure 2, Element 10), motivation being to increase the volume of the user data area in logical volume space.

Furthermore, Ito does not disclose wherein the second information is recorded in a last sector of the data block. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the disc definition structure of Ito to the last sector of the data block (Figure 2, Element 10), since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Namely, the DDS provides the same function regardless of its position in the data block.

Regarding claim 32, Ito discloses wherein the second information includes a second pointer pointing to an address where a defect list is recorded (Figure 2, Element 11, disk definition structure which points to the SDL).

Regarding claim 33, Ito discloses wherein the first and second pointers identify most current versions of the first information and the defect list, respectively, as of when the second information is recorded (Column 19, lines 21-26).

Regarding claim 34, Ito discloses a method of reproducing data from a recording medium (see Title), comprising: reproducing at least a portion of data recorded on the recording medium based on a data block recorded in a first management area of the recording medium when further recording can be made in the recording medium (Figure 7, Element 720), a first information including recordation status indicating recorded areas and non-recorded areas of the data area (Figure 2, Element 6b), the data block including second information including a first pointer pointing to an address where the

first information is recorded (Figure 2, Element 10, disk definition structure), the data block including a plurality of sectors (Figure 2, Elements 11-12 and 20-22), and reproducing at least a portion of data recorded on the recording medium based on a data block recorded in a second management area of the recording medium when no further recording can be made on the recording medium, wherein the data block recorded in the second management area is based on a latest data block recorded in the first management area (Figure 2, Element 4b in the lead-out area). Ito does not disclose where the first information is positioned within the data block

However, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the volume structure (Figure 2, Element 6b) of Ito to the data block (Figure 2, Element 10), motivation being to increase the volume of the user data area in logical volume space.

Furthermore, Ito does not disclose wherein the second information is recorded in a last sector of the data block. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the disc definition structure of Ito to the last sector of the data block (Figure 2, Element 10), since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Namely, the DDS provides the same function regardless of its position in the data block.

Regarding claim 35, Ito discloses wherein the second information includes a second pointer pointing to an address where a defect list is recorded (Figure 2, Element 11, disk definition structure which points to the SDL).

Regarding claim 36, Ito discloses wherein the first and second pointers identify most current versions of the first information and the defect list, respectively, as of when the second information is recorded (Column 19, lines 21-26).

Regarding claim 37, Ito discloses wherein the management area includes space to record a subsequent data block having the first information different from the first information in the data block (Figure 5, Element 22. Specifically, there is sector space for updated information in the data block).

Regarding claim 38, Ito discloses wherein the first information in the subsequent data block reflects changes in the recordation status since the data block was recorded (Column 19, lines 21-26).

Regarding claim 39 and 40, these claims recite limitations similar to those in claims 37 and 38, respectively, and are rejected over the same grounds.

Regarding claim 41, Ito discloses wherein the management area includes more than one of the data blocks and the reproducing step reproduces based on a most recently recorded one of the data blocks (Column 19, lines 21-26).

Regarding claim 42, Ito discloses wherein the most recently recorded one of the data blocks includes a most current version of the first and second information (Column 19, lines 21-26).

Regarding claims 43-45, Ito does not disclose wherein the second information is recorded in a last sector of the data block. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the disc definition structure of Ito to the last sector of the data block (Figure 2, Element 10),

since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Namely, the DDS provides the same function regardless of its position in the data block.

Apparatus claims 46-47 are drawn to the apparatus corresponding to the method of using same as claimed in claims 31-33. Therefore apparatus claims 46-47 correspond to method claims 31-33, and are rejected for the same reasons of obviousness as used above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gotoh et al. (US 6,581,167) disclose an information recording medium, information recording method, and information recording/reproduction system.

Takahashi (US 5,914,928) discloses an information recording disk having a replacement area. Ueda et al (US PgPub 2001/0026511) disclose an information recording medium.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER

/Thomas Alunkal/
Examiner AU 2627